Montana Laboratory Services Bureau (MTLSB)
Biological and Chemical Threat Agent Testing Policy
October 8, 2004

Overview

All potential biological and chemical threat samples must first be evaluated by local Law Enforcement (LE) according to local policy to determine if a *credible* threat exists. If a biological threat exists, prescreening of samples for explosive, radiological and chemical hazards is required prior to submitting the samples to MTLSB. Environmental samples that are determined to be *non-credible* biological threats by LE will not be accepted for biological testing. The complainants may arrange for biological testing at a private laboratory at their own expense.

If individuals are exposed to a suspect chemical incident, and the threat is credible, then blood and urine samples should be collected as outlined in this guidance. Environmental samples that are a credible threat for hazardous chemicals must also be prescreened for explosive and radiological hazards prior to submission for testing. Chemical samples may be tested at MTLSB. Please consult with MTLSB regarding the feasibility of testing and sample collection criteria.

All samples submitted by LE for testing of biological or chemical threat agents will be considered as evidence of a crime. After testing is completed, samples will be returned to local LE or to the FBI.

Organization Roles & Responsibilities

1. Contact the Montana Division of Emergency Services (DES) Duty Officer at **406-841-3911** to report the incident, and to do the following:
   A. Request assistance in evaluation of the threat
   B. Arrange for pre-screening of the sample

2. If the suspect object/event has been deemed "credible", notify MTLSB at **1-800-821-7284** to:
   A. Consult with the laboratory scientist on any sample collection procedures and/or shipping and delivery requirements
   B. Indicate what time the sample will arrive at the laboratory

3. Initiate MTLSB Chain of Custody form and attach to each individual sample

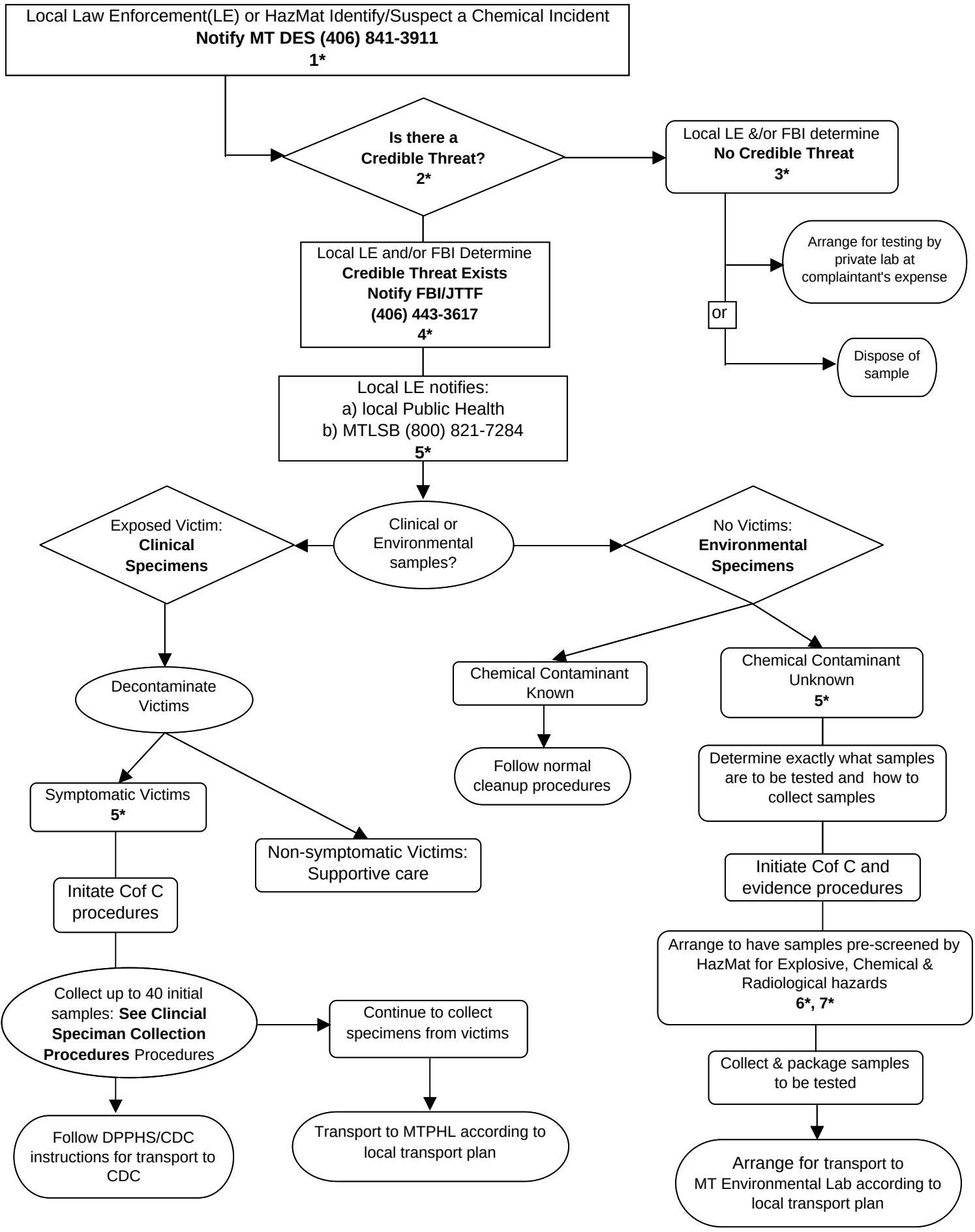
4. Notify local public health department. Indicate the contact person's name and telephone number on the Chain of Custody form

5. Arrange for sample delivery according to local preparedness protocols

Attachments

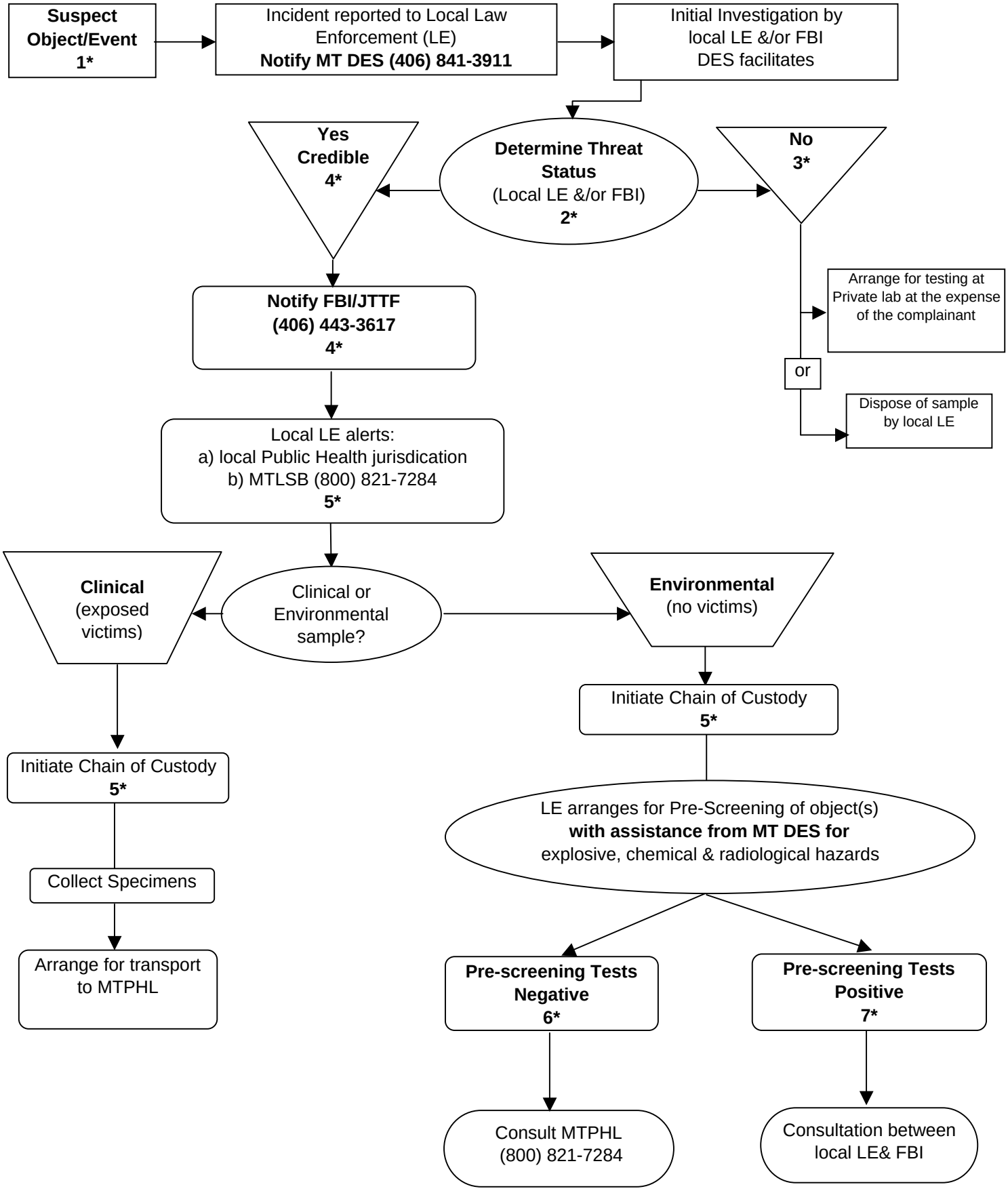
1. Chemical and Biological Flow Diagrams
2. Supporting informational notes for diagrams
3. List of private laboratories for biological testing
4. Collection and shipping instructions for human samples

Procedures for Handling Suspect Chemical Threat Samples



**** See "Guidance for Assessing Suspect Biological or Chemical Environmental Threats"***

Procedures for Handling Suspect Biological Threat Samples



See "Guidance for Assessing Suspect Biological or Chemical Environmental Threats"

Guidance for Assessing Suspect Biological or Chemical Environmental Threats

INTENT: The following general guidance is intended to assist first responders, including law enforcement, fire departments, and public health, who may be involved in assessing or providing information to others about whether or not a suspicious object or event presents a "credible threat".

	Finding	Definition/Action Items
1	**Suspicious object or event**	• Declared by a perpetrator: e.g., an object(s) alleged to contain an agent which will expose those opening it and those in the vicinity • Advance indication (Overt): something might occur as it has been suspected or recognized elsewhere • No announcement (Covert): detection depends on preparedness and education; training includes a high index of suspicion to consider something unusual and willingness to communicate concern to appropriate personnel for consideration
2A	**Person responding to object or event**	Evaluate situation: • Is anyone at the scene a likely target of a threat? • Is there a logical explanation for the presence of the item(s) causing concern? • If there is a spill, does anyone on site remember anyone spilling something? • Did anyone witness the arrival of a suspicious item? Was it a usual source of delivery (FedEx, UPS)? Was it received in the usual manner? • Is there a phone number available to call the sender of the item and find out what was enclosed? Is the sender someone you usually get mail from?

2B	If there is **powder on or in the mail item** and: • the item is not suspicious for a bomb, • the sender is known, • there is no articulated threat	• Recommend that the caller contact the sender for an explanation. Powdery materials are frequently found on mail because mail picks up dust in mailrooms, mail boxes, trucks, and sorting facilities. Envelopes shred tiny flakes of paper when sliced or torn open or dried correction fluid flakes off. Commercial printers and bulk mailers use powdery material, including corn starch to keep pages, envelopes and magazines from sticking together.
2C	Important information to give to **complainant and others potentially exposed** depending on the situation	• Do not touch, shake or empty the contents • If anything spills out, do not try to clean it up • Do not sniff, touch or taste it • Cover any spilled contents with paper or waste basket so it will not be disturbed by air or movement around it • If no visible powder, leakage or oily film, you might instruct caller to put each object in a separate plastic bag or container and place it on a stable surface depending on the situation • Use a separate bag for each object of concern; LE will help with labeling, if necessary, during the investigation • Prevent others from coming near the area; leave the room and close door if available. Remember, this could be a crime scene • Anyone who handled the item is to wash their hands well with soap and water; blow your nose to clear your nasal passages; dispose of the tissue in plastic bag, if possible. Wash your hands again. If any material spilled out onto clothing, further decontamination will be necessary. • Complainant or supervisor should provide a list of all people in the area and give to LE

2D	**At the scene,** the first responder (LE or FD)	LE or FD could decide that the potential severity (moderate to high risk) of the situation requires an Incident Command according to your local Emergency Response Plan, and undertake certain actions until information obtained indicates that a lesser response is safe.
2E	**Suspicious characteristics** Local LE does initial screening and risk assessment to identify whether the suspect object(s) is a credible threat. FBI can assist in joint assessment	• Threatening letter and/or history of threatening letters • An articulated threat, either explicit or implied • Item is suspicious for a bomb or other hazards (ticking, wires visible, unexplained material leaking from package) • Threatening phone call related to suspicious object • Unexpected delivery; fictitious or no return address • Unusual point of origin;, possibly mailed from a foreign company • Excessive postage; postmarked location doesn't match return address • No postage or no canceling of postage stamp • Misspelled word(s), particularly a common word or place • Poor handwritten or typed address; cut and paste lettering • Marked with restrictive endorsement; e.g., "Personal" or "Confidential" • Lopsided or uneven envelope/packaged item • Excessive weight, rigid or bulky • Excessive security material; e.g., tape or string • Package is hand-wrapped so can only be opened one way • Small holes; vapor, dust/powder

3	**Suspect object(s)/event determined NOT to be credible threat** If there is ***not*** **an articulated threat** (explicit or implied) and if the item is: • not suspicious for a bomb (e.g. ticking, protruding wires or foil, or unexplained material leaking from package) • no powder or other foreign material present • the caller is concerned only because the mail item is unfamiliar to them	• Recommend that the caller place the item in a plastic bag and discard it • Complainant may arrange for testing of a *biological* sample at a private laboratory, at the expense of the complainant • Local LE may dispose of the sample according to appropriate cleanup procedures *Chemical* samples may be accepted at the State of Montana Environmental Laboratory at the laboratory's discretion or at a private chemical laboratory. • Specific samples to be tested must be identified • Specific analyses must be requested in consultation with the State of Montana Environmental lab • Testing expenses are the sole responsibility of the complainant
4	**Credible threat is evident and involves a biological or chemical agent**	• **FBI Joint Terrorism Task Force (JTTF) is to be notified immediately at (406) 443-3617** FBI can help LE with a joint assessment and advise LE if FBI involvement is necessary.

5	The following are necessary actions for LE when an incident has been **ruled a CREDIBLE THREAT** of probable biological or chemical nature.
	
	Please consult the MTLSB at (406) 444-3444 or (800) 821-7284 for sample packaging instructions or any other questions.
	
	Items submitted to the MTLSB *must* be pre-screened for explosives, chemicals (volatiles) and radiological materials.
		• Notify the local public health (PH) department:
		  • Document on Chain of Custody (C of C) form
		  • PH can help with immediate antibiotic post-exposure prophylaxis for exposed individuals, specimen handling and transport, surveillance, health information and with communication with the public.
		• Collect evidence to be submitted for testing; collector must sign C of C
		  • *Double bag* each *biological* object(s); seal with evidence tape; initial and date tape; include absorbent material; attach Biohazard label
		  • *Triple bag* each *chemical* object(s); seal with evidence tape; initial and date tape; include absorbent material; attach Biohazard label
		  • Do not submit any material other than that to be tested
		  • Attach C of C form to the outside of the sample container
		• Arrange for pre-screening of object(s) with assistance from MT DES
		• Identify exactly what the sample should be tested for. Multiple samples will contaminate each other and compromise analytical testing. Samples whose integrity has been compromised will *not* be accepted for testing.
		• Include completed MTPHL Requisition form for clinical specimens

6	**Pre-screening tests are all Negative**	LE and HazMat sign appropriate line on C of C form • With PH, arrange for transport of sample to MTPHL according to the local transport plan • Notify MTPHL of the approximate time of arrival; (800) 821-7284 • Sample is signed over on the C of C form to a laboratory scientist at MTPHL When testing is completed, LE will arrange for pick up of the evidence. Chain of Custody form acknowledges LE is the final recipient of the evidence.
7	**One or more of the Pre-screening tests are Positive**	Local LE, local and state public health officials, and FBI consult on the next step.

The following is a list of private laboratories who will accept specimens for testing of suspect *biological* agents. The complainant is responsible for contacting the laboratories, making arrangements for sample transport, and for all financial obligations to the private laboratory.

Micro Test Laboratories, Inc.
104 Gold Street
P.O. Box 848
Agawam, MA 01001
(800) 631-1680
http://www.anthraxtestingservices.com

Aerobiology Laboratory Associates, Inc.
102F Woodwinds Industrial Court
Cary, North Carolina 27511
(919) 463-0522
http://www.aerobiology.net

Microbe Inotech Labs, Inc.
12133 Bridgeton Square
St. Louis, Missouri 63044-2616
(800) 688-9144
http://www.microbeinotech.com

Walter H. Carter, Inc
1927 Sourwood Drive
Dalton, GA 30720
706) 278-3202
http://www.healthyairquality.com/wcanthrax.htm

Pure Air Control Services
4911 Creekside Drive, Suite C
Clearwater, FL 33760
(800) 422-7873
http://www.pureaircontrols.com/anthraxtest.htm

Collection and Shipping Instructions for Clinical Samples Collected from Victims Potentially Exposed to Chemical Terrorism Agents

If there are potential victims exposed in a chemical incident, consider the incident credible and follow this sample collection protocol until otherwise instructed.

Required specimens
Unless you are otherwise directed, collect the following specimens from each person who may have been exposed:

- **Urine—Collect 25 mL.** Use a screw-capped plastic container. **Freeze as soon as possible** (−70° C or dry ice preferred). If possible, ship the specimen on dry ice. If dry ice is not available, you may ship frozen samples with freezer packs.
- **Whole blood—**Use three 5- or 7-mL purple-top (EDTA) tubes, vacuum-fill only **(unopened).**
- **Whole blood—**Use one 5- or 7-mL gray-top **or** one 5- or 7-mL green-top tube, vacuum-fill only **(unopened).**
- **For pediatric patients,** collect urine only, unless otherwise directed.

Order of collection
Please mark the **first** EDTA tube of whole blood collected with a **"1"** using indelible ink. The first EDTA tube of whole blood collected will be used to analyze for blood metals.

Blanks
For **each lot number** of tubes and urine cups used for collection, please provide two unopened purple-top tubes, two unopened green- or gray-top tubes, and two unopened urine cups to serve as blanks for measuring background contamination. The blanks help analysts determine if any contamination has taken place during storage or transport that might lead to an error in results.

Labeling
Label specimens with labels generated by your facility. These labels may include the following information: name, medical record number, specimen identification number, collector's initials, date, and time of collection. **Follow your facility's procedures for proper sample labeling**.

Information provided on labels may prove helpful in correlating the results obtained from the Rapid Toxic Screen and subsequent analysis with the people from whom the samples were collected.

Maintain a list of names with corresponding sample identification numbers at the collection site to enable results to be reported to the patients.

Packaging
Pack and ship these samples as **diagnostic specimens**. Wrap each sample top with waterproof, tamper-evident **forensic evidence tape**, being careful not to cover the sample ID labels. Be sure to cover the tube's septum with tape. **Initial and date the tape.**

Secondary packaging

Blood Tubes—

- Separate each tube of blood collected from other tubes, or wrap tubes to prevent contact between tubes.
- Place tubes in secondary packages. A variety of secondary packages may be used, for example, a gridded box wrapped with absorbent material and sealed inside a plastic bag, a sealable Styrofoam container, a blood tube shipment sleeve and transport tube, or individually wrapped tubes sealed inside a plastic bag.
- Place absorbent material between the primary receptacle and the secondary packaging. Use enough absorbent material to absorb the entire contents of primary receptacles. **According to 49 CFR 173.199(b), the secondary packaging used must be capable of withstanding without leakage an internal pressure producing a pressure differential of not less than 95 kPa (0.95 bar, 14 psi).**
- To facilitate processing, package blood tubes so that similar tubes are packaged together (e.g., all purple-tops together) and not mixed (i.e., purple-tops and green/gray-tops in the same package).

Urine Cups—Wrap **frozen** urine cups with absorbent material and place them into sealable secondary packaging, such as a sealable plastic bag, that complies with the requirements stated in 49 CFR173.199(b).

Outer containers

Use Styrofoam-insulated corrugated fiberboard containers (may be available from your transfusion service or send-outs department). **Do not ship frozen urine cups and blood tubes in the same package if using dry ice.**

Blood tubes—

- For cushioning, place additional absorbent material in the bottom of the outer container.
- Add a layer of frozen cold packs.
- Place secondary containers on top of the cold packs.
- Place additional cold packs or absorbent material between the secondary containers to reduce their movement within the outer container.
- Place a layer of frozen cold packs on top of the secondary containers.

Urine cups—

- For cushioning, place additional absorbent material in the bottom of the outer container.
- **Add a layer of dry ice**. **Note:** Do not use large chunks of dry ice for shipment, because large chunks have the potential for shattering urine cups during transport.
- Place additional absorbent material between wrapped urine cups to reduce their movement within the outer container.
- **Add an additional layer of dry ice.**

Preparing documentation

Since blood tubes and urine cups are shipped separately if using dry ice, prepare a separate "Shipping Manifest", as provided in the collection kit, for each type of specimen. Place the shipping manifest, including sample identification numbers, in a plastic zippered bag on top of the specimens before closing the Styrofoam lid of the corrugated fiberboard container.

Separate chain-of-custody forms must also be prepared for blood tubes and urine cups. Include a chain-of-custody form for each set of samples collected from an individual patient (i.e., one chain-of-custody form for each set of four blood tubes), not for each tube collected. Place the completed chain-of-custody forms in a plastic zippered bag on top of the Styrofoam lid of the corrugated fiberboard container.

Preparing containers for shipment

- Secure outer container tops and bottoms with filamentous shipping/strapping tape.
- Affix labels and markings adjacent to the shipper's/consignee's address that appears on the package.
- Ensure that two orientation arrows are located on two opposite sides of the outer container.
- Place a label on the outer container that indicates the proper name, "Diagnostic Specimens."
- For those containers with dry ice, place a class 9 label on the outer container. This label must indicate the amount of dry ice in the container, the address of the shipper, and the address of the recipient (in the absence of a shipper's declaration of dangerous goods). This label **must** be placed on the same side of the container as the "Diagnostic Specimens" label.

Shipping specimens:

Follow **DPHHS/CDC instructions for transport to CDC** as you are instructed **or** follow the **local Hospital or Public Health Specimen Transport Plan:**

Deliver to:
Montana Laboratory Services Bureau
1400 Broadway, Room B-105
PO Box 6489
Helena, MT 59604

Questions

If you have any questions or problems with sample packaging or shipment, please e-mail or call:

Mary Simmons
Chemical Terrorism Laboratory Coordinator
MT Laboratory Services Bureau
(406) 444-4115
msimmons@state.mt.us